

## MEMORANDUM

TO: FILE

FROM: MICHELLE KERR, RPM

RE: CHEMICAL RECOVERY SYSTEMS SITE VISIT

DATE: 6/27/2012

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On June 14, 2012, I visited the CRS site for oversight of field activities related to the supplemental additional groundwater studies. Larry Antonelli (OEPA), Pat Steerman (Steerman Environmental), Mike Watkins (Brown & Caldwell), and Joe Warburton (Brown & Caldwell) were present. The team was completing the river bed survey on the East Fork of the Black River. Surface water sampling was complete. Site conditions were very dry. We observed bedrock cores that were taken the week before. The site vegetation was in full force and the contractors had to do a fair amount of clearing to perform the field work. We observed seeps on both the east and west banks of the river and well as the rain gauge, transducer from a well, and river gauge. The new wells installed during the additional groundwater study were in good condition—free of vegetation, clean, and locked. The work was on schedule and no significant problems or issues were reported. Also there were no issues accessing the site via BASF's property.

CRS site visit June 14, 2012

Seep inspection

Surface  $H_2O$   $\rightarrow$  8ft  $\pm$  6in

NAPL measurement MW6, MW7A, 13A, 14A

river bed survey

Wk, Mike Watkins, Larry Antonelli,  
Pat Steerman, Joe Wamberton

Supplemental Additional Groundwater Studies  
+ contributions to river (gw from bedrock vs. seep discharge)

Seep observations used for permeability measurements. Due to nature of seeps data will be mostly qualitative. E.g. long, slow zones on east bank south.

Finishing river bed survey today (filling in points). Surface  $H_2O$  sampling is complete. Seeps marked already.

GW flow to north generally. Surface  $H_2O$  sampling locations marked (4).

- vert & horiz  $H_2O$  measurements

Transducers: 1 in river, 1 in <sup>sewer</sup> manhole, & wells. For river survey, measurements tied to well survey info provided by B/C from previous survey of wells, so all site survey info is relative. MW transducer set ~ 5 ft below  $H_2O$  level.

Bedrock cores - J - extremely fractured, K also, compared to others. Cores I, J, K did not have complete sections of NAPL-impacted rock that were expected but still had acceptable sections for petrophysical analysis. Went 30 ft. down, & want to create core bit, & saw clean rock. Heavy NAPL impacts obsd. ~ 14-20 ft in bedrock. Fracture zones & continuous.

AGWS-S field work done by 7/31/12, report early Oct. Maybe have meeting to discuss new site conceptual model before submitting final AGWS report, & same possible process for TI case report, maybe involving region & HQ staff.

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core point\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core1\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core2\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



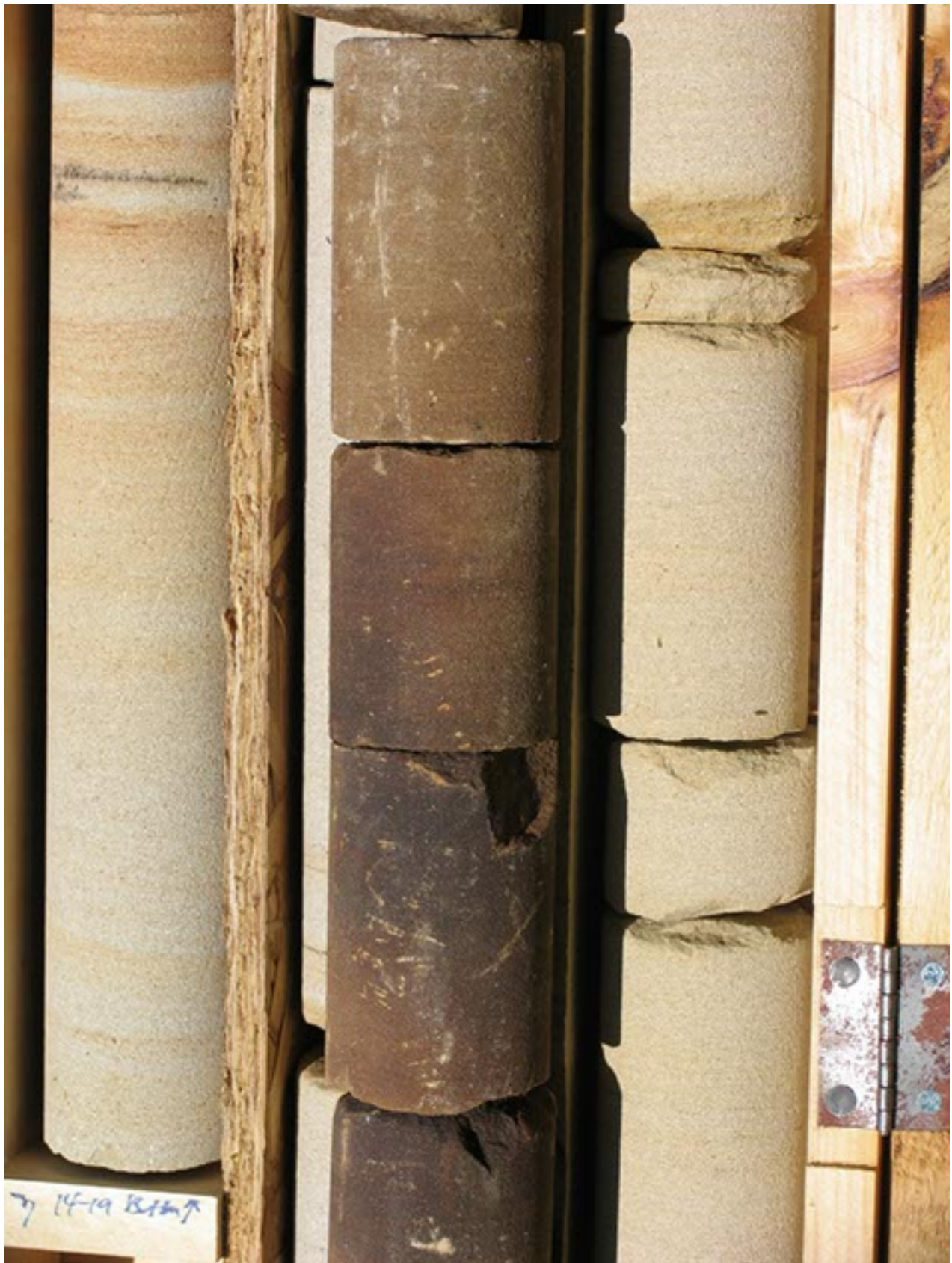
bedrock core3\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core4\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core5\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core6\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core7\_2012:6:14.JPG

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bedrock core8\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



bedrock core9\_2012:6:14.JPG

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bedrock core10\_2012:6:14.JPG

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bedrock core11\_2012:6:14.JPG

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cave west bank Black River\_2012:6:14.CRW

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core locations 3 white flags\_2012:6:14.JPG

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daisys\_2012:6:14.JPG

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entry east\_2012:6:14.JPG

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flower\_2012:6:14.JPG

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looking north CRS\_2012:6:14.JPG

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looking south at CRS site\_2012:6:14.JPG

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rain gague\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



river bank\_2012:6:14.JPG

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river gague\_2012:6:14.CRW

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river survey\_2012:6:14.CRW

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seep west bank Black River\_2012:6:14.CRW

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south lot looking east\_2012:6:14.JPG

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south lot\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



south old office bldg\_2012:6:14.JPG

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southwest corner of site\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



well c\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



wells g\_h\_2012:6:14.JPG

**Chemical Recovery Systems Site Photographs, U.S. EPA Region 5**



wells looking east\_2012:6:14.JPG

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west to river\_2012:6:14.JPG